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## **SECTORS OR COUNTRIES? TYPOLOGIES AND LEVELS OF ANALYSIS IN COMPARATIVE INDUSTRIAL RELATIONS**

**ABSTRACT:** This article investigates the relevance of sector differences in comparative industrial relations. A critique of the ‘methodological nationalism’ of traditional comparative industrial relations is proposed on the basis of an empirical analysis of industrial relations indicators in nine different sectors across the 27 EU member states. It is found that industrial relations vary across sectors as deeply as they do across countries, and that a cluster analysis of sectoral industrial relations produces very different results from one at national aggregate level. The concept of ‘national model’ of industrial relations, implying coherence and homogeneity within countries, and typologies of geographic industrial relations ‘types’ are therefore put in question. The article concludes by pointing at the theoretical and methodological implications of a focus on the sector as an important level of analysis.

**KEY WORDS:** Comparative industrial relations; sector; typology; cluster analysis; country variation; Europe.

## **Introduction**

Industrial relations studies have, from the beginning, focussed on the sector as the relevant level for the definition of product and labour markets, technologies and work rules, actors and regulations. However, in comparative industrial relations studies the attention to the national level has often come to the cost of neglecting the sector. Such neglect is particularly problematic in western Europe, where the sector is, traditionally, a fundamental for the governance of labour markets, at both the level of country and the European Union (EU): most trade unions and employer associations are organized and negotiate at the sector level (Marginson, 2005), and the sectoral governance of labour markets through social dialogue is considered as a key feature of the proclaimed 'European Social Model' (Kittel, 2002).

Over the last decade, attention has been drawn to the apparent deepening of differences between sectors. For instance, in the case of Germany – the most paradigmatic organised system of industrial relations –, it has been recently questioned whether in some expanding sectors (e.g. telecommunications, services) industrial relations correspond to the German national model at all (Batt et al., 2010; Doellgast, 2009; Royle, 2004). Sectoral shifts in employment, in turn, may lead these sector differences to transform the German system as a whole (Lehndorff et al., 2009). Subsequently, comparative research has also started to look at the sector with more attention (e.g. Katz and Darbishire, 2000; Marginson and Sisson, 2004; Marginson et al., 2008). However, such insights are still rather rare and based on comparisons of maximum two sectors. A consolidated tradition of systematic international sector comparisons is still waiting, despite

some important single-sector studies (e.g. Regini et al., 1999, Dølvik, 2001; Doellgast et al., 2009; Neergard et al., 2009).

This article provides some analytical steps towards the development of an international analysis of industrial relations at sector level. Data on the most important industrial relations institutions are compared across nine sectors and 27 EU countries. To start with, this allows us to demonstrate that industrial relations tend to vary more by sector than by country.

## **Comparative sector industrial relations**

The study of national industrial relations systems has over a century of history and traditions. In the context of increasing internationalisation and economic differentiation, the study of sectoral industrial relations at the international level is only making its first steps. If we look at the most popular textbooks in comparative industrial relations (Bamber et al., 2010; Bean, 1994; Ferner and Hyman, 1994, 1998; Morley et al., 2006), we do not even find ‘sector’ in the indexes, and while there are frequent mentions of various sectors, there is no systematic analysis of them.

The focus on the national level is particularly visible in existing typologies of industrial relations, that tend to adopt geographic configurations (e.g. the most recent and authoritative one in the *Industrial Relations in Europe Report* of 2008 (European Commission, 2009).

Indeed, national borders are very important for understanding industrial relations, as these have been generally institutionalised either by national states directly, or within clearly distinct national economic and political spaces. For instance, Crouch (1993) has traced the impact of national state traditions on European industrial relations since the nineteenth Century

and earlier, while Traxler et al. (2001) have tested empirically the relevance of national 'path dependencies' and the resilience of national industrial relations institutions, and Barbier (2008) has highlighted the role of national cultures for the framing of social and employment issues. In addition, industrial relations as a form of regulation of employment are closely interrelated to the welfare state, which is an eminently national institution with clearly demarcated national models (Esping-Andersen, 1990).

However, there is a growing awareness that variation within countries may be as large, or even larger, as between countries. Industrial relations theory has always been aware that one particularly important source of diversity is sectors, given that each sector is characterised by specific product and labour markets, resulting in different workforces, different work practices and different economic contexts. Yet international comparisons of sectors have been until recently rather scarce.

Interest in international comparisons of sectors was a by-product of the corporatist school in the 1970s and 1980s (Cawson, 1985). That approach culminated in a major attempt at mapping sectors and countries by a team led by Hollingsworth, Schmitter and Streeck (1994). That pioneering study focussed already on questions such as globalisation effects on sector governance, hypothesising that 'at the same time that it reduces the significance of nations as units of analysis, globalisation may increase the importance of sectors' (12). The theoretical reasons behind this hypothesis were the increasing role of sector-level socially constructed exchanges, and the agency by firms and public policy. However, the extremely ambitious and time-expensive research design of that study (a qualitative comparison of case studies across nine sectors and eight countries) could never be completed to a degree that would provide a test

to the hypothesis. Only 22 of the 72 (=9\*8) designed cases could be completed, and in three sectors only one country was included: not enough to compare sector and country variation. Moreover, that study, focussing on governance in general, paid little attention to industrial relations, on the assumption that these were already well-studied (Hollingsworth and Streeck, 1994) – which however was not (and is still not) true at the sector level. The partial conclusion of the scholars was then the enduring relevance of national differences, especially on industrial relations, and of obstacles to convergence (Hollingsworth and Streeck, 1994).

Katz and Darbishire (2000) re-opened the issue with their comparison of metalworking and telecommunications in seven countries, and their theory of ‘converging divergences’: owing to internationalisation, industrial relations systems converge within sectors, but diverge between them. Because countries may increasingly specialise in some sectors rather than others, this means that in countries with different specialisations the dominant industrial relations arrangements (especially collective bargaining) may diverge – even if within each sector they converge. A broader theoretical foundation for this argument is provided by the ‘Variety of Capitalism’ approach (Hall and Soskice, 2001). According to it, firms vary by the sector they operate in, and states develop complementary institutions, including industrial relations systems, that provide support to some sectors rather than others. In such a situation, globalisation fosters ‘institutional arbitrage’ and increases country specialisation in those sectors where there is an institutional comparative advantage, e.g. machinery production in Germany or biotechnology in the USA. The Variety of Capitalism approach has stimulated major advances in industrial relations research, but has been criticised for exaggerating complementarity and coherence within ‘models’ (or ‘types’) of capitalism and, again, underestimating the remaining intra-

country differences. Therefore, the various combinations of governance and regulations by country and sector are still an open problem, as for instance the idea of ‘recombinant governance’ suggests (Crouch, 2005). In particular, the degree to which the sectors a country does not specialise in (e.g. services in Germany) will follow the dominant national practice, stemming from other sectors, or the dominant international practice, stemming from the same sector in other countries is still to be explored and understood. For instance, Doellgast (2009) has recently questioned whether the German telecommunication sector governance corresponds to its ‘co-ordinated’ national model. Additionally, it has been frequently observed that few countries actually conform to the ‘ideal types’ described by the Variety of Capitalism school, and we do not know whether other, more ‘mixed’, countries maintain institutions and models of a predominantly national character, and whether they maintain them across all sectors.

This research problem confronts, more broadly, the enduring debate between national path dependency factors versus international convergence factors. While in the 1950s and 1960s convergence arguments were based on organizational and technological change, more recently they are based on globalisation arguments. This debate is relevant to debates centring upon typologies of industrial relations systems. Existing typologies have focussed on countries and national models, but it may be asked whether they are able to account for inter-sector variation. For instance, with regard to the most recent European typology (European Commission, 2009), five ‘models or clusters’ of industrial relations were identified in the EU, each with clear geographic concentration: ‘Organized Corporatism’ in Nordic countries, ‘Social partnership’ in Central Western Europe, a ‘State-centred’ model in Southern Europe, a ‘Liberal’ model in North-Western Europe, and a residual, less clearly defined ‘Mixed’ or ‘Transitional’ model in

post-communist Central Eastern Europe. While a degree of generalisation and simplification is inherent in any taxonomic effort, an important empirical question is how these clusters or models vary by sector. In particular, given that studies of corporatism have focussed on the differential ‘encompassingness’ of associations and collective bargaining, i.e. their capacity for combining different sectors (e.g. Crouch, 1993), it is likely that very important cross-sector variation affects countries whose industrial relations systems demonstrate little ‘encompassingness’, such as for instance UK and most Southern and Eastern EU member states. In this regard, a sector analysis is needed in response to criticisms expressed about classic typologies of industrial relations ‘models’ as distortive because, in a teleological way, they overestimate national similarity, coherence and rationality, while underestimating cross-border influences and internal variation, change and contestation (e.g. Meardi, 2004). Both terms ‘model’ and ‘system’ imply internal coherence, integration and rationality, and the term ‘model’ also has a normative connotation as something which can be followed and imitated. For this reason, in this piece of research, when suggesting different typologies we will limit ourselves to the more descriptive and less value-laden terms of ‘type’ or ‘cluster’, in a descriptive rather than explanatory fashion. The terms industrial relations ‘system’ and ‘regime’ (both are used as synonyms) is used to describe configurations of industrial relations characteristics. As industrial relations are described by many ‘dimensions’ (such as actors, processes, etc.) the use of the terms ‘system’ and ‘regime’ is preferred as it refers to a set of industrial relations characteristics.

A further topic of debate, with important policy implications, is the possibility of not merely international convergence between national states, but the development of ‘supranational’ industrial relations models. Nowhere has this issue received as much interest as



in the EU. The development of a EU-level industrial relations system has been the object of extensive debates that can only be summarised very sketchily here. From a neo-functionalist perspective, there are reasons to expect that increased economic integration and joint regulation across EU countries will foster the development of industrial relations regulation at the same level. From an institutionalist perspective, however, important scepticism has been raised, for instance by Streeck (1998), due to the persistence of major differences and even incompatibilities between national institutions. It is apparent that such an issue is particularly relevant at the sector level, given that the impact of the European single market and of EU regulations vary by sector, and that a specific effort has been made to develop sector-level European social dialogue, but in a rather uneven way (Keller and Sörries, 1998; Marginson, 2005; Pochet et al., 2009). For instance, the steel sector has been ‘Europeanised’ since the European Coal and Steel Community came into effect in 1952, whereas some service sectors, such as hairdressing, have remained localised with little or no transnational influences until recently. One important effort at investigating Europeanization at the sector level has been made by Marginson and Sisson (2004), who, in particular, highlighted the impact of multinational companies in fostering a complex double movement: towards decentralisation within national sectors, but also, indirectly and more tentatively, towards cross-border co-ordination. Marginson and Sisson’s study, however, focused on only two sectors (banking and manufacturing) in only four countries. Studies covering a broader range of countries and sectors are still missing.

The questions originally asked but not answered, on the international sector relevance by Hollingsworth et al. (1994) deserve further analysis given the technological and economic changes of the last twenty years. While new products and new conglomerate companies may

have blurred traditional sector demarcations, many economic and regulatory changes have been sector-specific, for instance in the evolution of the European Single Market. We attempt to answer those questions by exploring industrial relations variation at the sector level more systematically. We hypothesise that the hitherto neglected classifications and processes at the sector level may be as important as the national ones not only for the current reality of industrial relations, but also for potential transnational developments. This argument is rooted in an emerging recognition of the relevance of the industry level for methodology and theory of labour economics (Sako, 2008), the understanding of intra-national variation in industrial relations (Arrowsmith, 2010), and more generally in international economics and business (Dicken, 2007).

We investigate and compare industrial relations system variation across sectors and across countries, asking whether industrial relations systems vary more by country or by sector, and subsequently, which sectors and which countries are more diverse, and which ones are more internally similar. This in turn relates to the debates referred to above concerning convergence and divergence in comparative industrial relations: do economically internationalised or Europeanised sectors display stronger cross-country similarities than those characterised by national markets and regulations? And do certain countries display higher internal diversity by sector than others, and how does this relate to theories and typologies of national industrial relations systems? While we do not dispose of longitudinal data that would allow us to detect trends of convergence or divergence across time, we can expect that even a ‘snapshot’ of the mid-2000s can highlight links between sector industrial relations, national models, and sectoral internationalisation patterns.

Secondly, we analyse the details of the differences across sectors and countries, looking at the configurations, in terms of industrial relations regimes, of the various sectors and various countries. Again, this is related to internationalisation debates: which industrial relations characteristics, in terms of associational density, collective bargaining and consultation, prevail in the internationalised sectors as compared with the others? By analysing the data of nine sectors in 27 countries (or at least in all the countries where there are social partner organisations), we are able to test whether the types of industrial relations systems apparent at the sector level hold any resemblance to the established national typologies. In this process, we are able to propose a tentative classification of industrial relations models in the EU at the sector level, and to show how far they depart from the national-level ones.

This analytical contribution can be used to achieve a more fine-grained and nuanced description of European industrial relations than the traditional ones offer. This is important from a firm-centric perspective, as adopted by the Variety of Capitalism approach, as it shows whether firms in non-dominant sectors will operate in the same industrial relations regimes as those firms in dominant sectors. This is also important from a gender perspective, as sectors vary deeply (and much deeper than countries) in the gender composition of their workforce, and the traditional industrial relations research focus on male-dominated sectors such as manufacturing may result in neglect for the specificities of female-dominated sectors. For instance, Hassel (2007) has discussed at length how exactly the dominance of the sector in German industrial relations, combining with labour market gender segregation, results in specific gender representation gaps and undermines the idea of an overarching German ‘model’.

## Selection of industrial relations indicators

We map sectoral industrial relations on the basis of seven dimensions: (i) union density, (ii) union fragmentation, (iii) employer associations' density, (iv) fragmentation of employers' associations, (v) collective bargaining coverage, (vi) centralization of collective bargaining, and (vii) the involvement of social partners in socio economic policy making. Categories (i) to (iv) relate to the actors, while (v) to (vii) relate to the relations between them.

All these dimensions are extensively discussed as relevant in the comparative industrial relations literature. In short, the rationales for each dimension are the following.

*Union and employer associations' density.* Employers' association density is closely related to collective bargaining coverage, but is also of itself an important pillar of autonomous and incisive collective bargaining, as well as the main guarantor of its endurance. Union density by contrast has been often criticised as a spurious indicator of trade union strength, which may depend on other factors such as political linkages or mobilisation potential (Sullivan, 2010). However, the relevance of union density, if with exceptions, has been confirmed by several studies (e.g. Vernon, 2006; Scheuer, 2011), and it is also related, according to European Commission (2009), to a further dimension on which we do not have sectoral data, i.e. collective bargaining co-ordination. Overall, we expect associational density of employers' and employees' associations to reflect their representativeness and therefore political legitimacy to adopt a regulatory role.

*Union and employer associations' fragmentation.* According to corporatist theory (Schmitter, 1981), representative monopoly is crucial for the effectiveness of industrial relations

systems: the more competing organisations there are, the more unstable the system will be. The relevant indicator is the (logarithmic) number of sector employer associations, and of sector unions. Where there are no association, we use the (logarithmic) number of companies as relevant bargaining actors, indicating very high fragmentation.

*Collective bargaining coverage.* This is a central factor (dimension) of all comparative studies of industrial relations, and in particular of Clegg's (1976) famous study, centred on collective bargaining and trade unions. It affects directly any regulatory capacity, and it heavily depends on national regulation. The relevant indicator is the share of employees covered by collective agreements.

*Collective bargaining centralization.* Already relevant in past typologies (e.g. Clegg, 1976), this has been at the centre of recent debates on convergence of industrial relations, in particular with regard to decentralisation trends (e.g. Crouch and Traxler, 1995; Marginson and Sisson, 2004; Traxler et al., 2001). The relevant indicator is a composite index, summing indexes of the importance of multi-employer bargaining at sector- and at national levels, assuming value 0 where it is inexistent, 1 where it exists, but is not important, 2 where it is important, and 3 where it is the dominant bargaining level.

*Involvement in policy making.* Industrial relations structures overlap and interact with state (e.g. legal) regulations at the national level, but the degree of industrial relations' actors involvement in public policy may also vary by sector. This dimension is relevant for the issue of the quality of industrial relations, on which we face a shortage of sectoral data: where industrial relations actors are consulted by government or government agencies, we can expect more potential for so-called 'political exchange' (Crouch and Pizzorno, 1978) and therefore for

‘positive-sum’ games and integrative bargaining. The relevant indicator is constructed on the basis of (i) whether unions are consulted by public authorities; (ii) whether employer associations are consulted by authorities; and (iii) whether tripartite bodies exist. The relevant indicator is a composite index, summing (i) to (iii). Thus the variable on involvement in policy making ranges from observations 0 to 4 with 4 expressing the highest involvement.

Unfortunately, no sectoral data are available on other dimensions, such as role of the law, workplace representation systems, and strikes. We can assume that the former two do not formally vary by sector, but may vary in practice, while the latter notoriously varies significantly. In comparison to the European Commission’s national typology, three of our indicators are identical (union and employer associations’ density; collective bargaining coverage), and two are comparable: centralisation and policy involvement (approximately corresponding to European Commission’s ‘corporatism’). The main differences are our inclusion of fragmentation, a dimension as close as possible to European Commission’s ‘union concentration’ and ‘sector organisation’ variables, and exclusion of workplace representation, due to absence of data at the sector level. Employee representation systems are dependent on national laws, so its exclusion might lead to an underestimation of national differences. However, it is reasonable to expect that the actual coverage of workplace representation varies by sector similarly to union density, being lowest in sectors dominated by small private companies, such as hairdressing.

Our analysis is based on nine sectors, for which data are available from comparative representativeness studies by the European Industrial Relations Observatory. The selection of the nine sectors maximises variety, with no pretension of representativeness: it covers both

manufacturing and services, and both internationalised and less internationalised sectors: steel, sugar, tanning and leather, civil aviation, railway infrastructure, sea and coastal water transport, hospitals, hairdressing and other beauty treatment, and telecommunications. By concentrating on sectors we suppose that sectors exhibit differences in their ‘nature’, e.g. in technologies, product segments, degree of internationalization, size, ‘relevance’, etc. As sectors are not closed entities the notion, demarcation and definition of sectors was always disputed (e.g. Wolfe, 1955). Even though clear-cut definitions of sectors are difficult, our notion and conceptualization of sectors follows the Statistical Classification of Economic Activities in the European Community (NACE) classification which bases on the existence of sufficient differences in product segments. However, one limitation of the study is that product segments (i.e. NACE demarcations) do not perfectly overlap with industrial relations ‘segments’. Some product segments cover different industrial relations types but also some industrial relations types cover different product segments. Nevertheless we suppose that the sample selection in this work comprises enough differences in industrial relations and product market segments between our sectors in order to be able to contrast them. See Figure 1 for details on the sector definition.

## **Variety of sectors**

The analysis is carried out by looking at the standard deviations of the above-mentioned seven key industrial relations dimensions, across both countries and sectors. As different variables are of different nature, operationalization and have different scales, the standard deviation of each

variable is normalized to the range of 0 to 1 with 0 expressing the lowest (or no) and 1 the highest standard deviation. As a consequence of the normalization the variation of all dimensions are equally weighted (i.e. the difference between the lowest and the highest observation for all variables is the same). The average of the normalized standard deviations of the 7 variables expresses the average variation of countries' and sectors' industrial relations. The higher the score the higher is the variation and vice versa.

Figure 1 shows a combined ranking of countries and sectors according to their sectoral diversity in industrial relations systems. It can be seen that both countries and sectors differ substantially in their degree of cross-sectoral similarity of industrial relations systems.

- FIGURE 1 ABOUT HERE -

In terms of country differences, there are only few countries with rather homogeneous industrial relations across the nine sectors: these are one very small country (Malta), the corporatist countries Austria, Denmark and Finland, and the 'statist' country France. In particular, these countries are characterised by uniformly high organisation density and fragmentation, collective bargaining coverage, and collective bargaining centralisation. In the remaining 22 countries, the differences among sectors are strong. The most varied countries are from Central and Eastern Europe: in particular, Poland and the Czech Republic. If we consider the well-established typologies of national industrial relations (European Commission, 2009), we find that just one cluster, the Nordic one, displays strong cross-sectoral similarity, with the addition of France: only in these countries it appears legitimate to talk of national models. In the



others, it is better to talk of mixed and varied systems, and particularly so in the Central and Eastern European countries, which the literature has still been unable to classify and define (e.g. Bluhm, 2006; Kohl and Platzer, 2004; European Commission, 2009). The nine most heterogeneous countries are all countries that joined the EU in 2004 or 2007. Also, there is no effect of country size in terms of population: we find both small and large countries at either end of the continuum.

In terms of sectors, the large manufacturing one (steel) and those service sectors characterised by large providers display relatively similar industrial relations across the EU27. For instance, steel, an ‘old’ organised sector, is characterised by rather high organisation density across the EU, including the new member states (see Table 2 in the Appendix for sector characteristics). By contrast, sectors such as civil aviation, tanning and sugar have very different industrial relations characteristics country by country. For instance, in a very ‘localised’ sector, hairdressing, union and employer density is around zero in many countries, but high in others, such as Netherlands, Denmark and Finland. It appears that sectors frequently dominated by very few large companies, and especially with large dominating large multinationals and strong EU-level regulations (steel, telecommunications), as well as service sectors with transnational provision (transport) display more homogeneous industrial relations than local services (hairdressing) and smaller-size manufacturing (tanning, sugar). Hospitals are surprisingly homogenous across countries despite being a service sector.

The overall comparison of degrees of industrial relations similarity shows that 15 of the EU27 countries are more internally varied than any sector but hairdressing and tanning. Broadly speaking, sector variation (within countries) emerges as at least as deep as national variation

(within sectors). Considering that our manufacturing sector selection concentrates on well-established, rather than more modern sectors (i.e. pharmaceuticals and rubber/plastic), across the economy sector variation is likely to be even greater, given that modern sectors tend to be shaped by new specific and internationally uniform technologies rather than national traditions. This result clearly questions the cogency of classifications of industrial relations built exclusively at the national level.

## **Sectoral types of industrial relations in the EU27**

We proceed to test the distribution of sectors, according to the industrial relations typology proposed by the European Commission (2009), which detected five distinct regional groups: Nordic (organised capitalism), Central European ('Social partnership'), Southern European ('State-centred'), islands ('Liberal') and Central-Eastern European ('Mixed'). The relevance of European Commission's typology is that it is at the same time empirical/descriptive (cluster analysis) and theoretical, as it is closely linked to theoretical classifications of varieties of capitalism, welfare states and employment regimes. Although only three of our indicators (union density, employer density, collective bargaining coverage) are identical to those used by European Commission's own cluster analysis, it is possible to use our sector-level indicators as reasonable proxies for the same dimensions. By using the k-means clustering method, we can distribute our cases (9 sectors in 27 countries) alongside the same demarcating lines (by the same cluster means) as European Commission's (2009). This method enables us to partition the sector industrial relations scores into the clusters described by European Commission (2009):

each sector belongs to the cluster with the nearest means (calculated as k-means) of the 7 industrial relations indicators. For the indicators that do not directly correspond to European Commission's analysis, we use as cluster references the average of the national-level characteristics of the countries that belong, according to the European Commission, to that cluster.

Table 1 shows the result of the cluster analysis and the distribution first of the EU27 countries according to European Commission (2009), and then the distribution of 219 sector/country cases (24 cases are excluded due to lack of data or extremely small size). It has to be kept in mind that cluster analysis does not identify 'perfectly homogenous' types: each cluster includes cases that are most similar (in the sense of nearest scores), not identical.

- TABLE 1 ABOUT HERE -

The largest number of cases (65) is found in the 'Organised Corporatism' type, which at the national level is only represented by three Nordic countries, but this result should not be overestimated: our nine sectors are not representative for the whole economy, and organised sectors are over-represented.

In the 'Organised Corporatism' type we find the Nordic countries in nearly all sectors. But in addition to them, in all sectors but hairdressing and other beauty treatment we find a large number of countries from different national traditions. This includes some new member states, especially in steel (Poland, Romania, Slovakia), where the imprint of former strong centralisation is still visible. For instance, steel is quite exceptional in Poland for the

achievements of national level sectoral social dialogue. Hospitals and railways are also found most frequently in this cluster, including for instance UK hospitals, which, with their strong centralisation, state ownership and high unionisation and collective bargaining coverage, differ sharply from the British liberal model. The sectors in this cluster have ‘Dense’ industrial relations, in the sense of involving strong and numerous actors, at many levels (not merely the central or the decentralised ones), with extensive levels of engagement in collective bargaining and involvement in policy making with the state. A typical case for this cluster is the Finnish hospital sector: very high density and collective bargaining coverage, but also considerable fragmentation.

The ‘Social Partnership’ cluster is more heterogeneous. Of the six countries that are deemed to represent this cluster, only in Austria and the Netherlands sectoral industrial relations actually correspond to it in a systematic manner (in 6 out of 9 sectors). Germany, as a comparison, displays ‘Social Partnership’ industrial relations only in three sectors (sugar, civil aviation and sea transport). By contrast, we find in this cluster very frequently France (seven times), quite frequently Spain (4), and occasionally a variety of new member states. This kind of industrial relations, with high collective bargaining centralisation and coverage despite relatively low union density, corresponds actually to two different situations: cases where collective bargaining coverage relies on strong employer organisations (as in sugar in terms of sectors, and Austria in terms of countries), and those where it relies on state intervention, as measured by the variable ‘involvement’ (as in civil aviation, railways and telecommunications in terms of sectors, and France as a country). It is therefore disputable whether the term ‘Social

Partnership' is actually pertinent. Possibly, the inclusion of the employee participation dimension could allow redefining the profile of this cluster more precisely.

The 'State-centred' type is quite numerous but we must notice that a number of cases (marked by an asterisk) are relatively distant from the average values, or centre, of the cluster. Of the Southern European countries that should belong to this cluster, only Portugal is quite consistently found in it. Unsurprisingly, the sectors that most frequently present industrial relations of this kind are those once dominated by national providers: railways, civil aviation, telecommunications.

The 'Liberal' cluster is a rather residual one, with the smallest number of cases (29) and no clear concentration in any sector or country. Besides the UK, the most frequently represented countries are new member states such as Lithuania, Poland and Bulgaria, as the characteristics are not very far from those of the 'Mixed', or 'Central-Eastern European' cluster. Yet we find here also German telecommunications and German hospitals, confirming researchers' findings about the distinctive disorganisation of these sectors in that country (Doellgast et al., 2009; Grimshaw et al., 2007).

The 'Mixed' cluster contains a majority of cases from the new member states, with the addition of individual cases from the UK, Portugal, Ireland, Cyprus, Malta and Luxembourg. This type of industrial relations is characterised by extreme values on nearly all dimensions, in the sense of very low organisational density, collective bargaining coverage and collective bargaining coverage. It is typical of tanning and leather in the new member states, where this sector, unlike in western countries such as Italy and Portugal, is disorganised and often foreign owned and concentrated on sub-processing. Even more, it is typical of hairdressing, where it

combines all post-Soviet bloc new member states. Although defined by the European Commission as 'Mixed', such characteristics would deserve the definition of 'Empty', given the near-total lack of organised industrial relations.

This 'Mixed' or 'Empty' cluster is the only 'sector industrial relations' cluster that corresponds closely to the spatial distribution of European Commission's national typology. In Table 1 sector and national typologies are contrasted for all countries. 'Anomalies' are particularly evident in three sectors: steel, railways and hospitals. For instance, in steel unsuspected countries such as Poland and Romania have features of 'Organised Corporatism'. In railways, the same happens to Italy, Poland, Romania and Slovakia; and in hospitals it happens also to the UK and Ireland. Spatial patterns are visible in a very localised sector such as hairdressing, but not in sectors characterised by supranational regulation (e.g. telecommunications), international labour markets (e.g. hospitals) or multinational companies (e.g. steel).

## **Conclusion**

This article represents a critical-empirical exercise testing dominant typologies of industrial relations, by looking at the sector level. Any exercise as this can be deemed to be 'empiricist', merely stating the infinite complexity of the real world. In fact, authors of typologies nearly always admit this, with acknowledgments such as this: 'obviously, as with any classification, the real world is messier than these typologies and the application to single countries is an approximation at best' (European Commission, 2009: 50). In this sense, our description of the

disconnection between sectoral industrial relations and presumed national ‘types’ is not a falsification of existent typologies: to falsify them, an alternative theoretical typologies would be needed.

Yet our descriptive effort is not simply empiricist, as it opens up the possibility of theoretical reconsideration, which we can here only sketch. Such theoretical perspective would focus on both causes and effects: the problem of why some sectors *and* countries display certain characteristics, and the problem of these characteristics’ implications.

There are various strong theoretical reasons to argue that industrial relations vary most deeply by sector: from the theory of the firm, through industrial economics or labour market segmentation theory, to labour process theory. On one side, the technology and product markets factors that affect industrial organisation, and thereby the industrial relations, of sectors appears more visibly than when first analysed by Hollingsworth and Streeck (1994). By contrast, the national variation factors they highlighted, i.e. rules of behaviour, factual conditions and political and cultural resources no longer appear as generally dominant as then. In particular, by deconstructing and fragmenting the geographic clusters by the European Commission, our study suggests that cultures are not as influential as it was thought.

Sector differentiations do not replace the national ones: our analysis show that both levels are equally important, and that indeed in a small group of countries (the Nordics and Austria) national models are still very visible. But to understand industrial relations both levels are important: we cannot derive the kind of industrial relations that affect a company, or a group of employees, simply by the country they are located in; we must also know in what sector they operate. Some countries that are often considered as ‘models’ of industrial relations (the UK for

voluntarism, Germany for social partnership) emerge as particularly differentiated by sector, to the point where the cogency of the concept of ‘model’ has to be questioned. It also emerges that the new post-Soviet bloc member states, while they do present extremely disorganised industrial relations in many sectors, also contain important exceptions, especially in steel and railways. Conversely, not all sectors are equally homogeneous: the more internationalised ones are more clearly shaped than the localised ones.

In terms of implications, a sector focus may provide a better understanding of why transnational co-ordination and regulations develop more in some sectors than others (e.g. Anner et al., 2006). In particular, it is striking that, although all nine sectors we selected have the same formal transnational institution (a European Sector Social Dialogue Committee), the actual ‘productivity’ of these institutions in terms of agreements and process-oriented texts appears to be stronger in more homogeneous and more organised sectors (rail and sea transport).

So far, comparative industrial relations have predominantly focussed on the national level – but our analysis highlights that the sector requires a similar focus and explanatory effort. For such a focus, however, more systematic cross-country sector data will need to be collected, to make up for decades of developmental delay in comparison to ‘methodological nationalism’.

## References

- Anner, M., Greer, I., Hauptmeier, M., Lillie, N. and Winchester, N. (2006) ‘The Industrial Determinants of Transnational Solidarity: Global Interunion Politics in Three Sectors’, *European Journal of Industrial Relations* 12(1): 7-27.



- Arrowsmith, J. (2010) 'Industrial Relations in the Private Sector', in T. Colling and M. Terry (eds) *Industrial Relations. Theory and Practice*, pp. 178-206. Chichester: Wiley.
- Bamber, G., Lansbury, R. and Wailes, N. (eds) (2010) *International and Comparative Employment Relations*. London: Sage.
- Barbier, J. (2008) *La longue marche de l'Europe sociale*. Paris: Presses Universitaires de France.
- Batt, R., Nohara, H. and Kwon, H. (2010) 'Employer Strategies and Wages in New Service Activities: A Comparison of Co-Ordinated and Liberal Market Economies', *British Journal of Industrial Relations* 48(2): 400-35.
- Bean, R. (1994) *Comparative Industrial Relations*. London: Routledge.
- Bluhm, K. (2006) 'Auflösung des Liberalisierungsdilemmas: Arbeitsbeziehungen Mittelosteuropas im Kontext des EU-Beitritts', *Berliner Journal für Soziologie* 16(2): 171-86.
- Cawson, A. (ed.) (1985) *Organized Interests and the State. Studies in Meso-Corporatism*. London: Sage.
- Clegg, H. (1976) *Trade Unionism under Collective Bargaining: A Theory Based on Comparisons of Six Countries*. Oxford: Blackwell.
- Crouch, C. (1993) *Industrial Relations and European State Traditions*. Oxford: Oxford University Press.
- Crouch, C. (2005) *Capitalist Diversity and Change: Recombinant Governance and Institutional Entrepreneurs*. Oxford: Oxford University Press.

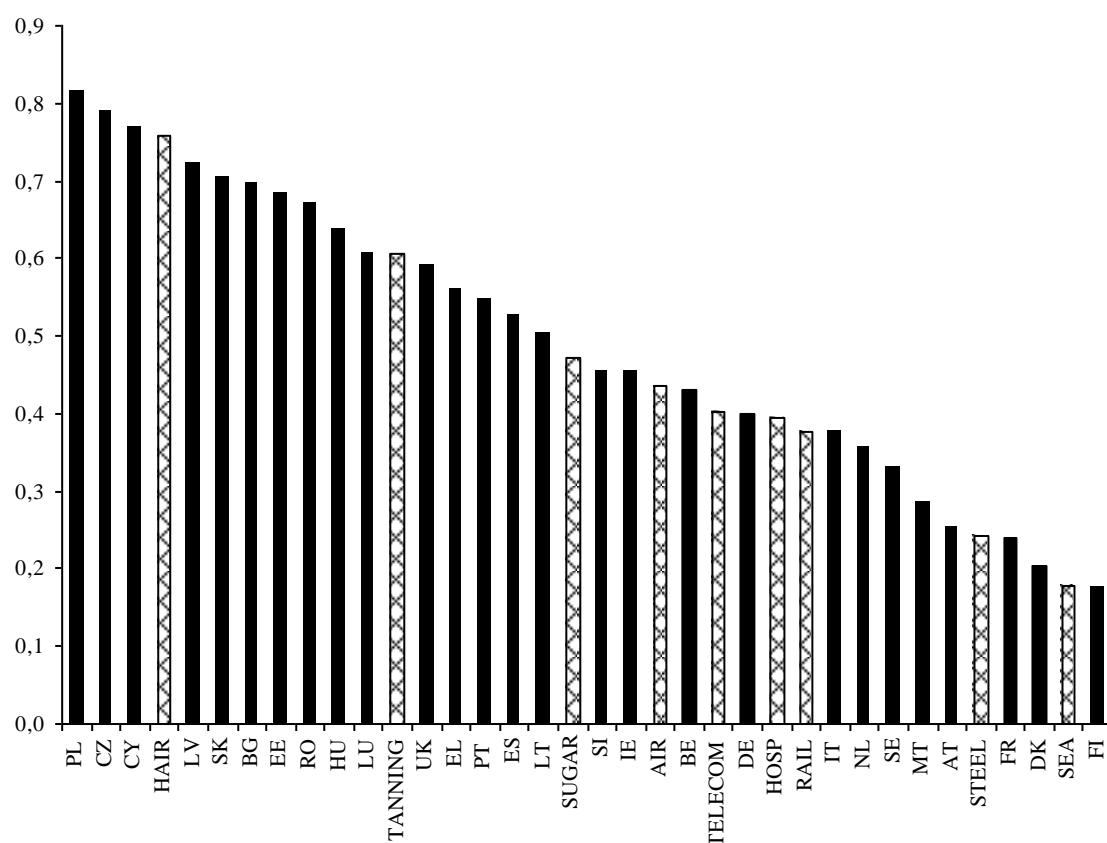
- Crouch, C. and Pizzorno, A. (eds) (1978) *The Resurgence of Class Conflict in Western Europe since 1968*. London: Macmillan.
- Crouch, C. and Traxler, F. (eds) (1995) *Organized Industrial Relations in Europe: What Future?* Aldershot: Avebury.
- Dicken, P. (2007) *Global Shift*. London: Sage, 2007.
- Doellgast, V. (2009) 'Still a Coordinated Model? Market Liberalization and the Transformation of Employment Relations in the German Telecommunications Industry', *Industrial and Labor Relations Review* 63(1): 3-23.
- Doellgast, V., Batt, R. and Sørensen, O. (2009) 'Introduction: Institutional Change and Labour Market Segmentation in European Call Centres', *European Journal of Industrial Relations* 15(4): 349-71.
- Dølvik, J.E. (ed.) (2001) *At Your Service? Comparative Perspectives on Employment and Labour Relations in the European Private Sector Services*. Brussels/New York/London: PIE-Peter Lang.
- Esping-Andersen, G. (1990) *The Three Worlds of Welfare Capitalism*. Princeton: Princeton University Press.
- European Commission (2009) *Industrial Relations in Europe 2008*. Brussels: European Commission.
- Ferner, A. and Hyman, R. (eds) (1994) *New Frontiers in European Industrial Relations*, Oxford: Blackwell.
- Ferner, A. and Hyman, R. (eds) (1998) *Changing Industrial Relations in Europe*. Oxford: Blackwell.

- Grimshaw, D., Jaehrling, K., Van der Meer, M., Méhaut, P. and Shimron, N. (2007) 'Convergent and Divergent Country Trends in Coordinated Wage Setting and Collective Bargaining in the Public Hospitals Sector', *Industrial Relations Journal* 38(6): 591-613.
- Hall, P. and Soskice, D. (eds) (2001) *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. Oxford: Oxford University Press.
- Hassel, A. (2007) 'The Curse of Institutional Security', *Industrielle Beziehungen* 14(2): 176-91.
- Hollingsworth, J., Schmitter, P. and Streeck, W. (1994) 'Capitalism, Sectors, Institutions, and Performance', in J. Hollingsworth, P. Schmitter and W. Streeck (eds) *Governing Capitalist Economies: Performance and Control of Economic Sectors*, pp. 3-16. Oxford: Oxford University Press.
- Hollingsworth, J. and Streeck, W. (1994) 'Countries and Sectors', in J. Hollingsworth, P. Schmitter and W. Streeck (eds) *Governing Capitalist Economies: Performance and Control of Economic Sectors*, pp. 270-300. Oxford: Oxford University Press.
- Katz, H. and Darbishire, O. (2000) *Converging Divergences: Worldwide Changes in Employment Systems*. Cornell: ILR Press.
- Keller, B. and Sörries, B. (1998) 'The Sectoral Social Dialogue and European Social Policy: More Fantasy, Fewer Facts', *European Journal of Industrial Relations* 4(3): 331-48.
- Kittel, B. (2002) 'EMU, EU Enlargement, and the European Social Model: Trends, Challenges and Questions', MPIfG Working Paper 02/1, Cologne: Max Planck Institut für Gesellschaftsforschung.

- Kohl, H. and Platzer, H.-W. (2004) *Industrial Relations in Central and Eastern Europe. Transformation and Integration. A Comparison of the Eight New EU Member States*. Brüssel: ETUI.
- Lehndorff, S., Bosch, G., Haipeter, T. and Latniak, E. (2009) 'From the 'Sick Man' to the 'Overhauled Engine' of Europe? Upheaval in the German Model', in G. Bosch, L. Lehndorff and J. Rubery (eds) *European Employment Models in Flux*, pp. 105-30. Basingstoke: Palgrave.
- Marginson, P. (2005) 'Industrial Relations in Europe: The Weak Link?', *Economic and Industrial Democracy* 26(4): 511-40.
- Marginson, P., Arrowsmith, J. and Gray, M. (2008) 'Undermining or Reframing Collective Bargaining? Variable Pay in Two Sectors Compared', *Human Resource Management Journal* 18(4): 327-46.
- Marginson, P. and Sisson, K. (2004) *European Integration and Industrial Relations. Multi-level Governance in the Making*. Basingstoke: Palgrave Macmillan.
- Meardi, G. (2004) 'Modelli o stili di sindacalismo in Europa?' *Stato e Mercato* 2: 207-35.
- Morley, M., Gunning, P. and Collings, D. (eds) (2006) *Global Industrial Relations*. London: Routledge.
- Nergaard, K., Dølvik, J.E., Marginson, P., Diaz, J. and Bechter, B. (2009) 'Engaging with Variable Pay: A Comparative Study of the Metal Industry', *European Journal of Industrial Relations* 15(2): 125-46.
- Pochet, P., Peeters, A., Leonard, E. and Perin, E. (2009) *Dynamics of European Sectoral Social Dialogue*. Dublin: Eurofound.

- Regini, M., Kitay, J. and Baethge, M. (eds) (1999) *From Tellers to Sellers. Changing Employment Relations in Banks*. Cambridge (MA): MIT Press.
- Royle, T. (2004) 'Low Road Convergence? The Significance of Sectoral Factors in Understanding MNC Cross-border Behaviour: The Case of the Spanish and German Quick Food Service Sectors', *European Journal of Industrial Relations* 10(1): 51-71.
- Sako, M. (2008) 'Do Industries Matter?', *Labour Economics* 15(4): 674-87.
- Scheuer, S. (2011) 'Union Membership Variation in Europe: A Ten-Country Comparative Analysis', *European Journal of Industrial Relations* 17(1): 57-73.
- Schmitter, P. (1981) 'Interest Intermediation and Regime Governability in Contemporary Western Europe and North America', in S. Berger (ed.) *Organizing Interests in Western Europe*, pp. 285-327. Cambridge: Cambridge University Press.
- Streeck, W. (1998) 'The Internationalization of Industrial Relations in Europe: Prospects and Problems', *Politics and Society* 26(4): 429-59.
- Sullivan, R. (2010) 'Labour Market or Labour Movement? The Union Density Bias as Barrier to Labour Renewal', *Work, Employment and Society* 24(1): 145-56.
- Traxler, F., Blaschke, S. and Kittel, B. (2001) *National Labour Relations in Internationalized Markets. A Comparative Study of Institutions, Change, and Performance*. Oxford: Oxford University Press.
- Vernon, G. (2006) 'Does Density Matter? The Significance of Comparative Historical Variation in Unionization', *European Journal of Industrial Relations* 12(2): 189-209.
- Wolfe, M. (1955) 'The Concept of Economic Sectors', *The Quarterly Journal of Economics* 69(3):402-20.

**FIGURE 1** Variation of sectoral industrial relations, by country and sector



Notes: Scores for countries show the average normalized (between 0 and 1) standard deviation of the seven industrial relations dimensions for countries calculated across all nine sectors and for sectors across all 27 EU member countries (for missing values see notes in Table 1). For both, the higher the score the higher the variation in industrial relations. Data source: European Industrial Relations Observatory representativeness studies (<http://www.eurofound.europa.eu/eiro/representativeness.htm>).

Abbreviation and NACE Revision 1 definition of sectors: Steel (STEEL) 27.1-3, sugar (SUGAR) 15.83, tanning and leather (TANNING) 19.1, civil aviation (AIR) 62.1-2 and 63.23, railways (RAIL) 60.1, sea and coastal water transport (SEA) 61.1, hospitals (HOSP) 85.11, hairdressing and other beauty treatment (HAIR) 93.02, telecommunications (TELECOM) 64.20.

**TABLE 1** Country clusters of national and sectoral industrial relations

	Type 1:	Type 2:	Type 3:	Type 4:	Type 5:
<i>National clusters of countries:</i> <sup>1</sup>	<b>Organised Corporatism</b>	<b>Social Partnership</b>	<b>State-centred</b>	<b>Liberal</b>	<b>Mixed</b>
	DK, FI, SE	AT, BE, DE, LU, NL, SI	EL, ES, FR, IT, PT	IE, CY, MT, UK	BG, CZ, EE, LV, LT, HU, PL, RO, SK
<i>Sectoral clusters of countries:</i>	<b>‘Dense’</b>	<b>‘Political’</b>	<b>‘Lean’</b>	<b>‘Fragile’</b>	<b>‘Empty’</b>
<i>STEEL</i>	BE, <b>DK, FI</b> , DE, PL, RO, SK, SI, <b>SE</b>	AT, CZ, IT, FR, NL, ES	<b>EL</b> , LV, LU, MT*, <b>PT</b> , UK	BG, HU, LT	
<i>SUGAR</i>	BE, BG, <b>FI</b> , IT, RO, SI, <b>SE</b>	AT, DK, FR, <b>DE</b> , HU, NL, SK, ES	<b>EL*</b> , LV*, <b>PT</b>	LT, PL*	<b>CZ</b> , UK
<i>TANNING</i>	<b>FI</b> , EL, SI, <b>SE</b>	AT, FR, NL, RO, ES	BE, BG*, DE, IT, <b>PT</b>	LT*, <b>UK</b>	<b>CZ</b> , EE, <b>HU*</b> , LV, MT*, <b>PL</b> , <b>SK*</b>
<i>AIR</i>	BE, <b>DK, FI</b> , IT, MT, NL, SI, <b>SE</b>	AT, CZ, FR, <b>DE</b> , LT, RO	BG, CY, EL, LU, PL, <b>PT</b> , SK*, <b>ES*</b> , UK*	HU, IE	EE, LV
<i>RAIL</i>	AT, CZ, <b>DK, FI</b> , DE, EL, IT, PL, RO, SK	FR, <b>LU</b> , NL, SI, SE, UK	BE*, EE, HU, IE, LV, LT, <b>PT*</b> , <b>ES</b>	BG	
<i>SEA</i>	BE, <b>DK, FI</b> , EL, IT, NL, RO, <b>SE*</b>	FR, <b>DE</b>	LV, LT*	BG, <b>CY</b> , EE, <b>IE</b> , SI*, <b>ES*</b> , <b>UK</b>	PT*
<i>HOSP</i>	AT, <b>DK</b> , EE*, <b>FI</b> , EL, IT, IE, LV, RO, <b>SE</b> , UK	<b>BE</b> , FR, LU, NL, SK	BG*, MT*, <b>PT</b> , SI, <b>ES*</b>	<b>CY</b> , DE, HU, PL	<b>LT*</b>
<i>HAIR</i>	<b>DK, FI</b> , NL	AT, IT, SI	BE, <b>FR*</b> , <b>PT*</b> , <b>ES*</b>	DE, LU*, SE, <b>UK*</b>	<b>BG</b> , <b>CY</b> , <b>CZ</b> , <b>EE</b> , <b>EL*</b> , <b>HU</b> , <b>IE*</b> , <b>LV</b> , <b>LT</b> , <b>PL</b> , <b>RO</b> , <b>SK</b>
<i>TELECOM</i>	<b>DK, FI</b> , FR, MT, <b>SE</b>	AT, EE, IT, NL, SK, ES	BE, CY, <b>EL</b> , HU*, LV*, LT, RO	DE*, PL, SI, <b>UK</b>	<b>BG</b> , <b>CZ</b> , LU, PT

Notes:

For abbreviations of sectors see notes in Figure 1.

<sup>1</sup> National types correspond to the European Commission (2009) typology/clusters.

Bold fonts for countries in the sector typology/clusters indicate correspondence to the national typology of countries.

For information on the scores of national and sectoral industrial relations characteristics see Table 2 in the Appendix.

\* = countries on the margin to be categorized into another cluster/type.

Missing data: Steel: IE; Sugar: CY, EE, IE, LU, MT; Tanning and leather: IE, LU; Railway infrastructure: CY, MT; Sea and coastal water transport: HU, MT, PL; Hospitals: CZ  
Hairdressing and other beauty treatment: MT; Telecommunication: IE. Excluded cases due to very low number of employees: Steel: CY, EE; Tanning and leather: CY, DK; Sea and coastal water transport: AT, CZ, LU.



**TABLE 2** Industrial relations characteristics of national types and of sectors

Industrial relations indicators:	UD <sup>1</sup>	UF <sup>2</sup>	ED <sup>1</sup>	EF <sup>2</sup>	CBC <sup>1</sup>	CENT <sup>2</sup>	INV <sup>2</sup>
Characteristics of national types: <sup>3</sup>							
<i>Organised Corporatism</i>	74.7	1.4	58.0	0.6	86.8	2.5	2
<i>Social Partnership</i>	35.4	1.0	72.7	0.4	82.8	2.5	2.5
<i>State-centred</i>	20.2	1.2	65.8	1.2	75.4	2	1
<i>Liberal</i>	33.9	0.5	47.5	0.5	35.3	0	0
<i>Mixed</i>	22.8	0.9	28.4	0.7	34.5	0	1
Characteristics of sectors:							
<i>STEEL</i>	59.0	1.1	80.4	0.0	99.5	2	2
<i>SUGAR</i>	55.0	0.7	100	0.0	100	2	1
<i>TANNING</i>	24.0	0.7	46.8	0.7	95.0	3	1
<i>AIR</i>	61.2	1.8	63.6	1.1	95.0	1	1
<i>RAIL</i>	72.0	1.1	94.0	0.7	100	3	1
<i>SEA</i>	80.0	1.1	88.0	0.0	75.0	3	2
<i>HOSP</i>	59.5	1.6	81.8	1.1	95.0	3	2
<i>HAIR</i>	3.0	1.1	32.0	0.9	24.0	2	0
<i>TELECOM</i>	47.9	1.1	52	0.7	82.5	2	1

Notes:

*Abbreviations:*

UD = union density (in %), UF = union fragmentation, ED = employer associations' density (in %), EF = fragmentation of employers' associations, CBC = collective bargaining coverage (in %), CENT = centralization of collective bargaining, INV = involvement of social partners in socio economic policy making.

For abbreviations of sectors see notes in Figure 1.

*Calculation of scores:*

Calculation of national scores: <sup>1</sup> Industrial relations indicators and scores correspond to European Commission (2009). <sup>2</sup> Scores are calculated as the average of the national-level characteristics of countries that belong to the national cluster according to European Commission (2009).

Calculation of sector scores: scores are calculated as the average of countries.

*Further details:*

<sup>3</sup> National types correspond to the European Commission (2009) typology.

For details on operationalization of variables for the industrial relations dimensions see chapter on the selection of industrial relations indicators. For details on sectors and for missing data see notes in Figure 1 and Table 1.

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